In the balance

The importance of developing the sense of balance is examined by *Anne O'Connor* and *Anna Daly*

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What do you think of when you hear someone described as 'well balanced'? Is it that they don't fall over much, or are good on a balance beam? We are more likely to be thinking of someone who is well-adjusted – 'emotionally or psychologically untroubled', as one medical dictionary describes it.

This link between our balance mechanism (the vestibular system) and our emotional well-being is very real, as Sally Goddard Blythe explains in her book *The Well-Balanced Child – Movement and early learning*.

Balance is more than just the ability to walk along a narrow beam, or stand upright on a wobbly plank. It is a full body mastery that seems to be fundamental to emotional development and later learning.

Some of the research into the causes and treatment of dyslexia would seem to suggest that problems with the inner ear and cerebellum may be linked to difficulties with reading and writing. The cerebellum is strongly influenced by the vestibular system and is the part of the brain involved in regulating our movements so that they can become automatic, precise and well-controlled.

Think of the difference between a toddler just mastering the art of walking and a five-year-old who does it without thinking. Using brain scans, neuroscientists have discovered that parts of the cerebellum are also involved in activities that we learn to do through practice. The cerebellum 'remembers' things through muscular memory. If you can play the piano, touch-type or are a whizz at texting, then you know that the 'memory' seems to be in your fingers, rather than in your head.

There are sensory-motor aspects like these in many of the cognitive operations that we associate with education, such as sequencing, learning tables, word association, remembering lists of things like the days of the week, and other mental skills.

These are also linked to activity in the cerebellum. It seems to work like the fine-tuning switch that we used to see on televisions and radios. It modulates signals from other parts of the brain, so that some actions can become automatic, leaving the higher brain free to concentrate on the important thinking and adapting functions.

LEARNING DIFFICULTIES

The work of people like Harold Levison in America and Peter Blythe and Sally Goddard at the INPP in Chester suggest that problems with vestibular development and the cerebellum can be the underlying cause of many learning difficulties.

As a result, they have developed therapeutic activities that allow the brain to catch up and fill in the missing gaps in vestibular development. These have been very successful in addressing learning difficulties in children who have been failed by conventional remedial approaches.

Difficulties with learning have an obvious impact on our self-esteem, but there are other links between balance and our emotional well-being. A Jean Ayres talks of the importance of 'gravitational security' (see Physical Development, Part 4, *Nursery World*, 18 June 2009) and how scary

PHOTO AT RANDOLPH BERESFORD CHILDREN'S CENTRE BY TERI PENGILLEY

Balance supplies the brain with the knowledge of where the body is in relation to space around it

UNDERSTANDING 'ROUGH AND TUMBLE'

WHY IS IT IMPORTANT?

'Rough and tumble' allows full sensory integration for developing minds and bodies. Touch, effort, smell, sight, sound, proprioception and risk assessment are all involved as we learn to communicate physically with others.

Such play includes working both with and against others, solving problems and developing a sense of self by 'standing our ground'. Think of it as the development of physical negotiation skills, all of which underpin speech and language development, as well as listening and relating to others.

WHAT DOES IT INVOLVE?

✔ Full body contact with others ✔ rolling ✔ wrestling ✔ wriggling ✔ jostling ✔ pushing ✔ pulling ✔ dodging ✔ falling

Falling is an important skill that requires balance and control. It will help children to become good at risk assessment and able to respond to different physical environments. Most importantly, falling is a skill that needs to be repeated in order to be mastered. Exploring the fun and sensations of 'safe falling' is part of vestibular development.

'Physical scribbling' Just as we encourage and understand a child's scribbles and doodles as pre-writing skills and explorations, so the same can be said for physical play and lots of wriggling and fidgeting! It all needs to be worked out, repeated and improved before other skills can develop that will lead to successful writing, reading, communication and physical mastery.

SAFETY

It is understandable that adults have safety concerns about children engaging in rough and tumble play. As ever, we need to use our common sense, do our risk assessments and be alert to potential dangers. We also have a responsibility to ensure that all children have access to this most important physical experience at a level of interaction that is exactly right for them, so we need to tune into our children and their individual stages of physical and sensory development.

SPACE

- Make sure the numbers of bodies and nature of movement play are suited to the space you have, or choose to use.
- Keep it clear of furniture and other obstructions, but it doesn't have to be a 'soft' or padded space. Children need to learn to negotiate different surfaces and to develop their own risk assessment around them.
- Make the most of outdoors and the natural environment for full-body exploration on and around trees, grass, boulders, water and so on.

SUPERVISION

- Think about how and where you position yourself to support this kind of play. Are you an observer or an integral part of the play experience? Both are valid.
- Always supervise physical activities but resist the role of over-policing and getting in the way of potentially exciting explorations.
- Encourage and guide without being too anxious or abruptly ending activities if they get too energetic. Find alternative ways of redirecting or extending the action, for example, through role play.
- Don't provide all the answers. Use your knowledge of individual children to know when to stand by and give encouragement while children negotiate tricky situations, or find out how to right themselves after a bump or trip.
- Be aware of dynamics and the intentions behind children's movements – it is often seen as rude or aggressive when a child is physically engrossed in a movement or sensation, yet we wouldn't distract them if they were equally engrossed in a writing task, for example.
- Can you spot the difference between aggressively out-of-control behaviour and imaginative fully engaged, physical contact?
- Be aware of children who get over-excited or particularly stressed by lots of physical play. Find a smaller 'bite-sized' way of playing with them, and carefully monitor development.
- Be aware of children who are wary of close contact with others. Find ways of building their confidence and making the sensation feel safe. Try using fabric or scarves for pulling and tugging (see-saw games, playing 'horse', etc), allowing children to join in with a level of sensation that works for them. Seek guidance if you have serious concerns about a child's tactile sensitivity.

GETTING INVOLVED

One of the best ways to help children to keep themselves safe while engaging in physical play is to role-model good ways of doing it, just as we would with any other area of learning. We can add to their knowledge and experience of keeping safe either verbally or through our own bodies through demonstration or support.

- Getting involved with children's physical play might involve leading, playing alongside, coaching or demonstrating a skill or even providing the other body to tumble with! This is particularly important with babies and very young children, when a 'tuned-in' adult can gauge energy and pleasure levels from their contact with the child as they play physical games.
- Role-model safe ways to fall, and talk through your own thoughts and emotions when engaging in exciting physical experiences.

it must be to not feel 'connected' to the ground.

It is balance that supplies our brains with the vital information about where our bodies are in relation to the space around us.

Sally Goddard Blythe writes, 'Imagine being given a map and being told to find your way to point B without knowing where you are. Navigation requires knowledge of your own position before you can find your way to other points on the map.'

She quotes examples of children and adults with psychological disorders that can be linked to poor vestibular development.

ATTACHMENT THEORY

It's also not too difficult to make connections between these ideas and the notions of attachment theory. Good-enough attachments allow us to feel connected to others and 'rooted', helping us to recognise ourselves in relation to others.

A child with no secure attachments, who does not feel connected to anybody, lives their life with the same 'gravitational insecurity' of an astronaut cut loose from their space station, floating around in deep space.

In addition, many children with attachment issues also display poor sensory integration, often due to a lack of appropriate sensory stimulation in their early life. We only have to remember the role that touch and gentle movement plays in soothing a baby's distress, to appreciate the strong links between the senses and early attachment behaviour.

As practitioners building secure secondary attachments to the children in our care, we have the opportunity (as well as the responsibility) to pay attention to movement and sensory development.

We now know that exposing children to a wide and stimulating range of physical and sensory experiences will have a beneficial effect on their emotional well-being and their learning development.

'Rough and tumble' plays an important part in this (see box, p14). We need to be 'at home' in our own bodies so that we can reach out and form relationships with others and our world. This can be explored, kinaesthetically and somatically, through the actions and experience of the body.

If we miss out on this full physical exploration, there is a chance that we will never feel comfortable with some tactile or sensory experiences and may always have some internal disquiet.

Physical exploration benefits a child's emotional well-being

It is also important that we appreciate the time that is involved in developing the tricky skill of balance and acquiring control of our bodies.

Sally Goddard Blythe reminds us that balance is 'the art of not moving' and that the ability to remain totally still is the most advanced of all levels of movement!

And yet we constantly hear children being admonished to 'sit still' or 'stand still in the line'. It is really hard for a young child to be still, because they haven't done enough moving yet! It can take seven years for the vestibular pathways to be fully developed. A child who continues to have difficulty being still as they get older needs more opportunities for movement, rather than fewer.

In fact, they are communicating this vital piece of information through their movement behaviour, and it is our responsibility to take note of this in our assessments and let it inform our future planning for that child.

As Sally Goddard Blythe writes, 'Education should be a continuous process of sensory as well as intellectual training, not an environment for sensory atrophy (sitting still all day long).'

We need to be mindful of this if we want all our children to grow up strong and 'well-balanced'. ■

Anne O'Connor is a freelance early years consultant and trainer. Anna Daly is an associate .ecturer at University of Central Lancashire and a freelance community dance artist, specialising in projects and training for early years dance play. She was formerly training and development co-ordinator with Ludus Dance and continues to work with them

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